Theobald Smith[1]
1859–1934

Theobald Smith was one of that small group of pioneer bacteriologists in America who grasped the unique opportunity of developing a science which has revolutionized medicine and some branches of industry. He was an American bacteriologist who did not go to Europe for study under the early masters of his subject but to a remarkable degree was self-taught, developing his own methods. Beginning work in the eighties and early nineties of the last century, the period of the most rapid discovery of pathogenic microörganisms, he has said that during this exciting period it was difficult to wait for the daily newspaper to learn what pathogenic organism had been discovered. He was, however, no mere microbe hunter. To him the discovery of an etiological agent was only the introduction to the larger problems of the interrelations of host and parasite. The subjects of his many publications include: the method of transmission of infectious agents from one individual host to another, as in the insect transmission of the parasite of Texas fever, the rôle of Heterakis in the production of enterohepatitis of turkeys; the differentiation of closely related organisms, as the varieties of tuberculosis bacilli, the Brucella, the paratyphoid bacilli, the streptococci and the anaerobes; simple and ingenius methods of cultivating and differentiating bacteria, as the use of the fermentation tube, the use of bits of fresh unheated animal tissue in media and the differential value of sugar fermentation; comprehensive studies of infections natural to animals; the production of immunity by heat killed cultures; the transmission of antibodies in utero and through the colostrum. Although his attention was often focused

[1] The picture reproduced herewith is of the bronze plaque by Bela Pratt which is mounted in the hall of the Department of Comparative Pathology at Harvard Medical School.

upon the investigation of infectious diseases of animals, his excursions into pure bacteriology, parasitology or immunology were more frequent than those into histological pathology. Of his 250 publications no less than 75 may be said to have been in the field of pure bacteriology. It is interesting to note that 14 papers appearing throughout the years 1886 to 1932 were concerned with the variability of bacteria but that his interpretation of these results was always conservative. He knew how to take advantage of the by-products of research without losing sight of the main problem and was always alert for incidental discoveries which in many instances were the first observation of these phenomena, such as the existence of flagellar and somatic agglutinins, the immunizing effect of toxin-antitoxin mixtures, the Theobald Smith anaphylactic phenomenon and scurvy in guinea pigs. His published papers are well distributed in the fields of bacteriology, parasitology, immunology, public health and pathology. The synthesis of his discoveries and observations is given in the Vanuxum Lectures for 1934 on Parasitism and Disease.

Educated as a physician it is difficult to say whether Dr. Smith's devotion to comparative pathology was more the result of choice or opportunity but he soon recognized that disease is a natural biological phenomenon common to all living things, that the fundamental phenomena are the same whether in man or animals whereas the latter often afford the best opportunity for observation and experiment. For this reason he preferred the study of infections natural to animals rather than the study of animals inoculated with human pathogens. By way of illustration he has said that more could be learned about typhoid by studying paratyphoid in animals than by studying animals inoculated with typhoid bacilli. His appreciation of the importance of animal industry, the economic dependence of man upon animals, his interest in the diseases of animals and in those infections common to animals and man caused him to give equally sympathetic consultation to the animal husbandryman, veterinarian and physician. He served successively in the Bureau of Animal Industry of the U. S. Department of Agriculture, as Professor

of Comparative Pathology at Harvard University and as Director of the Department of Animal Pathology of The Rockefeller Institute for Medical Research.

Dr. Smith's characteristics of mind and habits of work inspired in those who worked with him the highest confidence and respect. He was meticulously careful and thorough. Details were too important to be slighted or delegated to others. He kept careful notes on all that he observed. A series of notes started, filed and added to as opportunity permitted was never complete but always a growing piece of research. When a report of work was published it often represented observations made over a long period of years; it was mature, carefully written, moderately stated and as nearly as possible correct in every detail. This is his reputation. To him waste of effort or material, even in the midst of plenty, was inexcusable, but effort and material spent in thorough work was never wasted regardless of the result obtained. He did not exert undue pressure upon those working under him. With verbal criticism he was always moderate. He rarely offered praise. To be left alone by him was a compliment and made one feel that much was expected. As a writer, lecturer and teacher he presented clearly what was essential and nothing superfluous. By example and with few words he exerted a subtle influence that left its mark on those who worked with him.

Nothing that might be said could more eloquently describe the scope, originality and permanent value of Theobald Smith's contributions to science than a list of his publications. To read them is to be impressed by astute observations which only now seem new and there are others which must be rediscovered to be appreciated. Their author would ask no other recognition or reward.

J. Howard Brown.